Curriculum Map

Subject: IT & COMPUTING **Year Group: 7**

Time Period	Autumn Term	Spring Term	Summer Term
Content	Students will complete 2 units of work. **Unit 1 Digital Communication (Online Safety) –** In the first half term, students will explore the power of online communication and how to stay safe online. Students will understand how to use digital tools responsibly and the legal implications of online publishing. Students will also develop their research techniques, using search tools more effectively and being able to make judgements on reliability. Students create their own digital posters to show others how they can be safe online. **Unit 2 Digital Graphics –** In the second half term, students will complete a digital graphics design unit. This unit will teach students how to use IT in a business context. Students are given a product/service which they have to promote using a variety of digital media. Students will explore how graphics are used in the real world, producing their own graphic products using bitmap and vector tools.	**Unit 3 Computers and Coding –** Students will develop their understanding about the fundamentals of Computer Science. They will be able to identify the main components that make up a computer system and explain how they fit and work together, to create real world systems. Students will learn how to use algorithms as a tool to think logically, supporting them to solve computational problems. They will learn how to convert between binary and denary values, as well as applying simple Boolean logic to programming. Students will apply this knowledge using BBC Micro:bit technology. Supporting them in creating programs and following instructions, using a graphical, drag and drop code editor. Learning the basics of program flow and building on programs that they create.	**Unit 4 Game Design (Scratch) –** Students will cover one unit of work; Game Design using Scratch. Students will learn the basic concepts of programming using a visual, drag and drop programming software called Scratch. They will develop their skills each week by creating different programs in the form of games, interactive stories and animations. This will lead them to plan, design and create a game of their own choice.
Skills	Students will learn to use presentation software effectively to suit the needs of their audience and purpose. Students will	Students learn how to use basic computational thinking skills such as Algorithms, decomposition and abstraction	Students will build on their block based programming knowledge using Scratch programming software. Creating a variety

	be able to communicate their understanding of and follow safe practice when using digital devices online. Students will learn how to effectively research information using trusted secondary sources. Students will be able to effectively design and plan products to meet the needs of their audience and task purpose. From their designs, students are able to use a range of digital tools using a graphics editing software to create digital artefacts.	when planning a program. Students will learn how to convert denary to binary and vice versa. Students will learn how to use block based programming online software to create a variety of programs that demonstrate key programming constructs.	of programs that demonstrate key programming constructs. Students will have the skills to plan and create a game of their own choice.
Key Questions	What is meant by Online Safety? What dangers should we be aware of when online? How can we keep ourselves safe when using our devices online? Who can we ask for help? What makes a good presentation? What is a Bitmap image? What is a Vector image? What makes an effective logo design? What is meant by target audience and purpose?	What is Computational Thinking? Decomposition? Abstraction? What is an Algorithm? What are the main parts of a computer system? What is Binary? What is a BBC Micro:bit and how do I program using block based programming?	What do each of the blocks do within the Scratch programming block palatte? How do I get my sprites to interact? What is a Variable? What is iteration (looping)? What is Selection? How can I incorporate these within my programs?
Assessment week and content	**Unit 1 Digital Communication (Online Safety) – wb 16/10** **Unit 2 Digital Graphics – wb 11/12**	**Unit 3 Computers and Coding – 18/03**	**Unit 4 Scratch Programming – 08/07**